Vidya Prasarak Mandal's

B. N. Bandodkar College of Science (Autonomous), Thane

DEPARTMENT OF BIOCHEMISTRY

Syllabus for

Programme: Certificate Course

Course Code: BC006

Course: Food Adulteration and Quality Management

With effect from academic year

2018 - 2019

PREAMBLE-

Department of Biochemistry, VPM'S B. N. Bandodkar College of Science, Thane is organizing a certificate Course on **FOOD ADULTERATION AND QUALITY MANAGEMENT** for undergraduate and postgraduate students.

Among the different branches of science, Food Science focuses on Composition of Food, Food Processing, Food Quality Management and extension of shelf life of food etc. Biomolecules are the main constituents of food having significant role in food processing, preservation, decomposition and spoilage. Our nutritional status, health, physical and mental faculties depend on the food we eat and how we eat it.Food adulteration is the act of intentionally debasing the quality of food offered for sale either by the admixture or substitution of inferior substances or by the removal of some valuable ingredient.

This course aims at spreading awareness among the students, hands on training to detect adulteration and understanding about food quality management.

OBJECTIVES-

1. To provide hands on training for determining food quality.
2. To provide theoretical and practical knowledge about food processing.
3. Basic understanding about food quality control.
4. To be able to explain comprehensively the differences between quality control and quality assurance and their underlying principles.
5. Explain and detail the different quality attributes of color, viscosity, consistency, texture, size, shape, flavor, in terms of the following – definition/evaluation, principles or theory, application and significance.
6. Be knowledgeable and skilled in the various methods instrumentation and techniques used to analyze different foods for their components and quality attributes.
7. To diagnose adulteration of frequently consumed food items.

UNIT NO.	COURSE CONTENTS	NO. OF LECTURES
1.	**Introduction to Food Science** Introduction, types of food, functions of food, food groups, Food and Health	**4 L**
2.	**Food Adulteration** **2.1** Food adulteration, types of adulterants, **2.2** Health impacts of adulteration, **2.3** Food hazard- definition, types **2.4** Food poisoning- types, prevention and control **2.5** Diseases- neurolathyrism, Botulism, aflatoxin, egotism, staphylococcal intoxication, salmanellosis etc	**5 L**
3.	**Food Additives** **3.1** Preservatives, flavoring agents, sweeteners, stabilizers, antioxidants. **3.2** Additives Vs. Adulterants **3.3** Food colors **3.4** Additives to Avoid	**5L**
4.	**Evaluation of Food** **4.1** Organoleptic Evaluation of Food • TASTE (GUSTATION) Introduction, importance of gustation, Chemical dimensions of basic tastes- sweet, bitter, sour, salt. • ODOUR AND FLAVOR (OLFACTION) Introduction and importance of odour and flavor • COLOR Introduction and importance of color, Dimensions of color, perception of color • TEXTURE Introduction, definition and importance, Texture classification • OTHER SENSES Temperature sensation, kinesthetic sensations, and sound sensations etc. **4.2** Quality Assessment and Quality Management	**5L**
5.	**Packaging and Labeling of Foods** **5.1** Packaging – functions, classification, materials used. **5.2** package analysis, package designing.	**4L**
6.	**Food safety** **6.1** Food Safety **6.2** Food laws **6.3** certification Systems **6.4** FSSAI	**3L**
7.	**Practical session** **7.1** Adulteration Test - I **7.2** Adulteration Test – II **7.3** Organoleptic Assessment	**9L**
8.	**Theoretical Examination and Assessment**	**3L**
	TOTAL	**38L**

Evaluation Scheme

Theory Examination: Suggested Format of Question paper

Duration: 3 Hours **Total Marks: 100**

All questions are compulsory

Q. 1	Based on Unit I	15
Q. 2	Based on Unit II	15
Q. 3	Based on Unit III	15
Q. 4	Based on Unit IV	15
Q. 5	Based on Unit V	15
Q. 6	Based on Unit VI	15
Q. 8	Objectives Based on all Units	10

Each question may have following sub questions

Long answer question	6 Marks
Short note questions	4 Marks
Objectives	1 Marks

Internal Assignments have to be submitted in the hard copy format in the department

Total number of assignments: 02 (each carrying 25 Marks) **Total marks: 50**

Total of Internal Assignments	**50 Marks**
Total of Theory Examination	**100 Marks**
Grand Total	**150 Marks**

Duration

Duration in terms of Hours	40
Per day	4 Hours
No. of days	10
No. of weeks	2
Course will be conducted ONCE per year	Month of April

~ * ~ * ~ * ~ * ~ * ~